Documenting Databases of Different Types

Database Type A - Adabas

```
10:31:03            *****  P R E D I C T  4.3.1  *****            2003-05-31
                              - Add a Database -
Database ID ..... HNO-DA
Type ............ Adabas, Isolated
Physical DBnr ... 1
Belongs to VM ......... HOME
Keys ..                                                          Zoom: N

Adabas attributes                    Natural file numbers
  Maximal files ........               System file (FNAT) ...
  Checkpoint file ......               NAT-Security (FSEC) ..
  Adabas security ......               Predict (FDIC) .......
  Size of RABN ........* 0
  Distr. transaction ..* N

  Vista access only .... N

Abstract     Zoom: N




  Additional attributes ..* N          Associations ..* N
```

Note:
Attributes that are not in the table below are described in the section Defining Basic Attributes of Databases.
Two additional input screens can be called from this screen.

Attributes	
Adabas attributes	
Maximal files	Number of files permitted in the database (ADADEF parameter MAXFILES). If isolated database=Y, this number must either be 0 or at least 5 but not more than 5000. If isolated database=N, this number must either be 0 or at least 5 but not more than 5000.
Checkpoint file	The number of the Adabas file which contains checkpoint information for the database. Predict automatically creates a data dictionary object with the file ID SAG-ADA-CHECKPOINT for this file.
Adabas security	The number of the Adabas file which contains Adabas security information for the database. Predict automatically creates a data dictionary object with the file ID SAG-ADA-SECURITY for this file.

Size of RABN	Specifies the length of RABNs in the database. **0** not specified **3** 3 Byte for 24-bit RABNs **4** 4 Byte for 31-bit RABNs
Distr. transaction	**N** No (Default). **RM** Resource Manager. **TM** Transaction Manager. Field must be filled if the database is part of the distributed transaction processing (DTP) of the Adabas Transaction Manager
Vista access only	**Y** If the attributes of the database are such that files in the database can only be accessed using Adabas Vista. Vista access only is set by Predict. If **N**, it can be set to **Y** with the Rename/Retype/ Renumber function (code N).
Natural file numbers	
System file (FNAT)	The number of the Natural system file.
NAT Security (FSEC)	The number of the Adabas file which contains Natural Security information.
Predict (FDIC)	The number of the Adabas file which contains the dictionary data.
Additional Options	
Additional Attributes	**Y** A new window within the screen is displayed for specifying either one or more of the following attributes: blank Base attributes W Description O Owner 1 Sizes 2 Asso sizes 3 Data sizes 4 Encodings 5 OS/400

Associations	**Y** A new window within the screen is displayed for specifying an association.

Specifying the Size of an Adabas Database

Physical properties of a database (device types and sizes of the datasets containing the Adabas ASSO, DATA, WORK, SORT and TEMP) can be defined in the screen shown below.
The screen is displayed by setting the parameter Size in the Additional attributes window.

```
10:31:57            *****  P R E D I C T  4.3.1  *****             2003-05-31
                             - Add a Database -
Database ID ..... HNO-DA                              Added 2003-05-31 at 10:29
Type ............ Adabas Isolated                        by HNO
Physical DBnr ... 1
---------------------- Database primary sizes -------------------------------
                          Number of             Alternate RABN
         *Device      Cylinder     RABN         Start     End
ASSO R1
     R2
     R3
     R4
DATA R1
     R2
     R3
     R4
WORK R1
     R2
SORT R1
     R2
TEMP R1

* Additional attributes ..* S          Associations ..* S
```

Rules for Defining the Size of a Database

- If the device type and the size in RABNs (relative Adabas block numbers) of each extent is specified, Predict calculates and displays the equivalent size in cylinders, beginning with a greater than sign (>) unless the number of cylinders is exactly equivalent.
- If the size is specified only in cylinders, Predict calculates and displays the equivalent size in RABNs. Adabas does not use the first track of the first extent of the Associator, Data Storage and workfiles. In these extents, the number of RABNs is therefore smaller then the number of blocks contained by the specified number of cylinders. The start and end of the range of alternate RABNs can also be specified.
- Four extents for ASSO and DATA (R1 - R4) can be defined in the above screen. To define more extents (up to 16) the parameter ASSO and/or DATA in the Additional attributes window of the screen have to be set to Y.

Note:
See the **Adabas Administration documentation** for detailed information on the topic.

Parameters	
Device	Devices are identified with a four-letter code that must have been defined with the function Adabas device types in the Special functions menu. If a device type is changed, the change should also be made in each file objects that is linked to the database.
Cylinder	The number of cylinders of the specified device that are occupied by the specified extent of the specified database.
Number of RABN	The number of RABNs (relative Adabas block numbers) of the specified device that are occupied by the specified extent of the specified database.
Alternate RABN	The first and last RABN that were reserved on the specified device as alternate RABNs for the specified database. Alternate RABNs can be defined by using either the ADADEF utility or - for a reflective database - the ADAREF utility. For further information see the Adabas Utilities Documentation.
Additional Attributes	
EDIT ASSO	**Y** If more than four extents are to be defined.
EDIT DATA	**Y** If more than four extents are to be defined.

Specifying the Encodings of an Adabas Database

Universal encoding support of an Adabas Database can be defined in the screen shown below.
The screen is displayed by setting the parameter Encodings in the Additional attributes window.

```
10:31:03            *****  P R E D I C T  4.3.1  *****             2003-05-31
                             - Add a Database -
Database ID ..... HNO-DA-NEW                          Added 2003-05-31 at 10:30
Type ............ Adabas, Isolated                        by HNO
Physical DBnr ... 244


Universal encoding support
  UES ..... N (Y,N)
  UACODE .* none
  UWCODE .* none
  FACODE .* none
  FWCODE .* none









    Additional attributes ..* S          Associations ..* N
```

Note:
See the **Adabas Administration documentation** for detailed information on the topic.

Modify Vista Elements

```
10:34:50            *****  P R E D I C T  4.3.1  *****             2003-05-31
                          - Add Vista element -
Database ID ..... HNO-DA-NEW                        Added 2003-05-31 at 10:30
Type ............ Adabas, Vista                        by HNO
Physical DBnr ... 250


Network ......... HOME
Vista
 Environment ID .
 DBnr ...........
 Name ...........









  Additional attributes ..* S          Associations ..* N
```

Parameters

See the section Including the Definition in the Vista Table in the section Adabas Vista in the **Predict and Other Systems documentation** for a description of all possible parameters.

Database Types C, E, P - Conceptual, General SQL Handler, Entire System Server Nodes

The following screen is displayed when adding, modifying or copying databases of the types C, E and P.

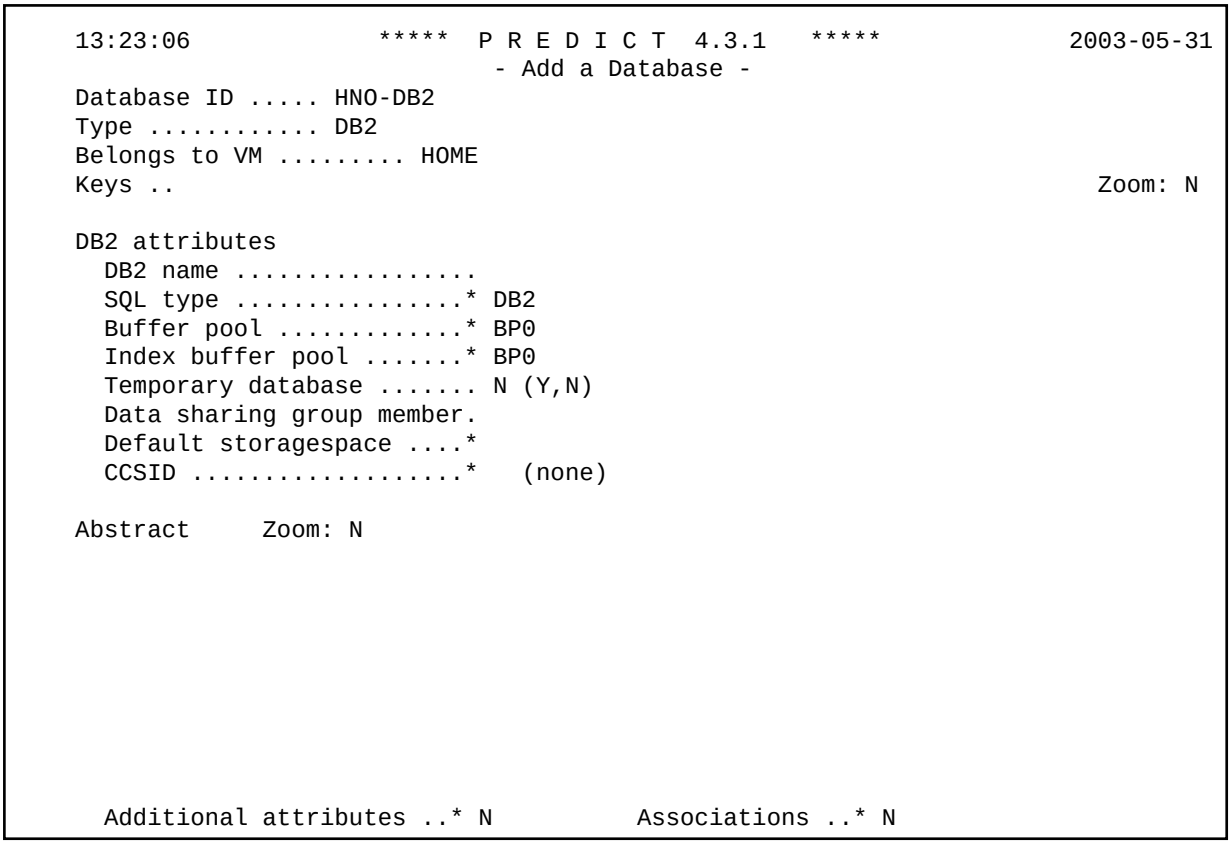
```
10:33:21            *****  P R E D I C T  4.3.1   *****             2003-05-31
                             - Add a Database -
Database ID ..... HNO-DA-C
Type ............ Conceptual
Keys ..                                                          Zoom: N

Abstract     Zoom: N
```

All parameters are described in the section Defining Basic Attributes of Databases.

Database Type D - DB2

The following attributes apply to databases of type D. Attributes not listed here are described in the section Defining Basic Attributes of Databases.



Attributes	
DB2 Attributes	
DB2 name	The name of the database in DB2.
SQL type	Valid values: • **DB2** • **SQL/DS**
Buffer pool	The buffer pool of the database. Enter an asterisk for valid values.
Index buffer pool	Buffer pool which is used for the indexes created within the database. Enter an asterisk for valid values.
Temporary database	**N** No (Default). **Y** Database is used for declared temporary tables.
Data sharing group member	Name of the member of the data sharing group. Leave blank or specify name with up to eight characters (letters A-Z, digits 0-9 and special characters $, # and @).
CCSID	Defines the encoding scheme of the database. **blank** not specified. **A** ASCII. **E** EBCDIC.

Database Types Q, M, R, H - Adabas SQL Handler, RMS Handler, rdb Handler, Other Handler

Database type Q is used to document databases of type Adabas SQL handler. See the section Adabas SQL Server in the **Predict and Other Systems documentation** for more information.

Database type M is used to document RMS databases; database type R is used to document rdb databases.

Database type H is used to represent database handlers, such as USER-DB, SESAM, DL1, WIZZARD, TRS etc. Database type other handler can be used to reserve a database number (prevent it from being used by Adabas).

```
13:03:04            *****  P R E D I C T  4.3.1   *****            2003-05-31
                           - Modify Database -
Database ID ..... HNO-DA-M                          Added 2003-05-31 at 10:51
Type ............ RMS Handler                          by  HNO
Physical DBnr ... 1
Belongs to VM ......... HOME
Keys ..                                                            Zoom: N

Abstract     Zoom: N
```

Parameters	
Physical DBnr	For database type RMS Handler: the database number must be declared in NATPARM as an RMS database number if DDMs for RMS files contained in the database are to be generated. See table in the section Defining Basic Attributes of Databases for range of permitted values.

Database Type I - IMS

IMS databases cannot be added with the Add a database function. To create an IMS Database object in Predict, an existing IMS database must be incorporated with the INCORPORATE NDB function.

```
13:20:27            *****  P R E D I C T  4.3.1   *****            2003-05-31
                           - Modify Database -
Database ID ..... HNO-CUSTOMER                        Added 2003-05-31 at 13:11
Type ............ IMS                                   by  HNO
Belongs to VM .........
Keys ..                                                              Zoom: N

IMS attributes
  IMS or DL1 ..... IMS
  IMS name .......
  IMS type ....... PHYSICAL

Abstract     Zoom: N
  This database was incorporated
  from NDB: CUSTOMER
  on 2003-05-31









  Additional attributes ..* N          Associations ..* N
```

The following attributes apply to databases of type I. For attributes that are not in the table, see the section Defining Basic Attributes of Databases.

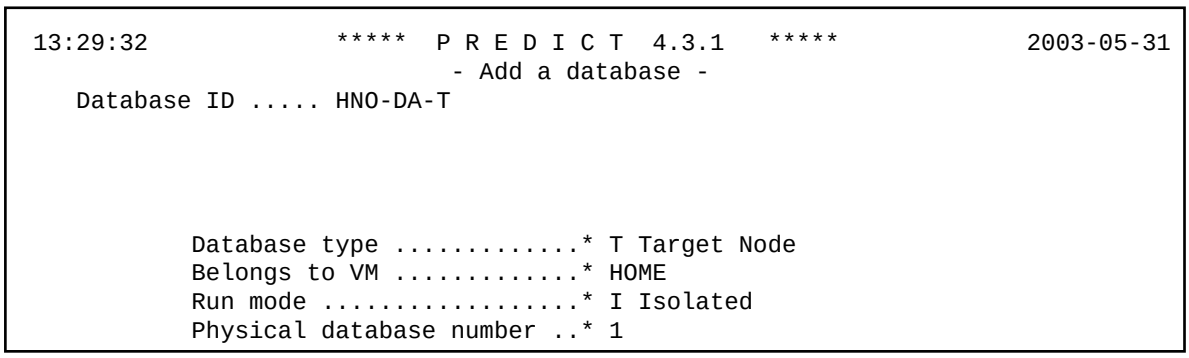
Attributes	
IMS attributes	
IMS or DL1	The kind of database. Valid values: • IMS • DL1
IMS name	The name of the database in IMS.
IMS type	The type of the database in IMS. Valid values: • LOGICAL • PHYSICAL.

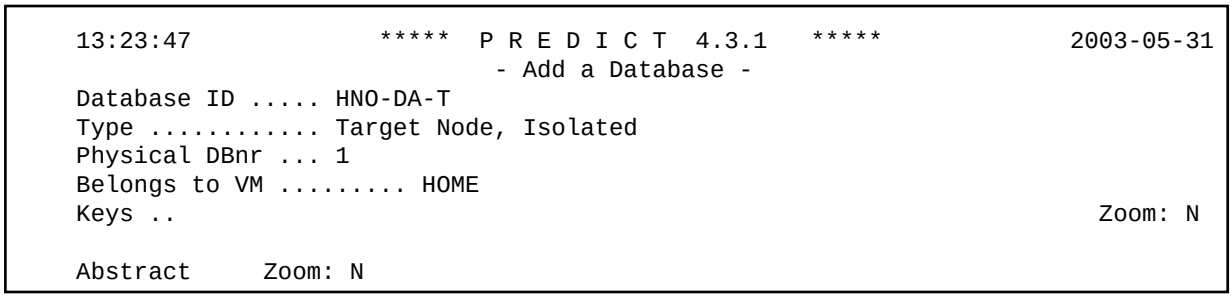
Database Type T - Target Node

Database type T is used to represent database nodes entered in the ID table of an SVC which cannot be documented with a corresponding database type: BROKER, NATURAL GLOBAL BUFFER POOL etc.

This type of database is used to reserve the corresponding database number and thus prevent this number being used for an Adabas database.

Databases of type T are defined in two screens:





Attributes	
Attributes not listed here are described in the section Defining Basic Attributes of Databases.	
Run mode	Must be specified for databases of this type. Valid values: **I** Isolated **L** Local
Physical database number	The physical database number must be in range 1-65535.

Database Type V - VSAM Handler

Database objects of type V are used to collect all definitions of VSAM clusters which are accessed by the same Natural VSAM handler. The database number defined in a database object of type V is used by the GENERATE DDM function.

Databases of type V are defined in two screens:

```
13:57:30             *****  P R E D I C T  4.3.1   *****             2003-05-31
                            - Add a database -
   Database ID ..... HNO-DA-V




           Database type .............* V VSAM Handler
           Belongs to VM .............* HOME
           Run mode ..................* L Local
           Physical database number ..* 2
```

```
13:59:18             *****  P R E D I C T  4.3.1   *****             2003-05-31
                            - Add a Database -
   Database ID ..... HNO-DA-V
   Type ............ VSAM Handler
   Physical DBnr ... 2
   Belongs to VM ......... HOME
   Keys ..                                                          Zoom: N

   Abstract     Zoom: N
```

Attributes	
Attributes not listed here are described in the section Defining Basic Attributes of Databases.	
Run mode	Must be local for databases of this type.
Physical database number	The physical database number must be in the range from 1 - 65535.

Other SQL Database Types

The screens used to maintain database objects of the following types are the same as for VSAM databases above. The physical database number must be less than or equal to 254.

J	Ingres Handler
O	Oracle Handler
X	Informix Handler
Y	Sybase Handler
B	Adabas D Handler

